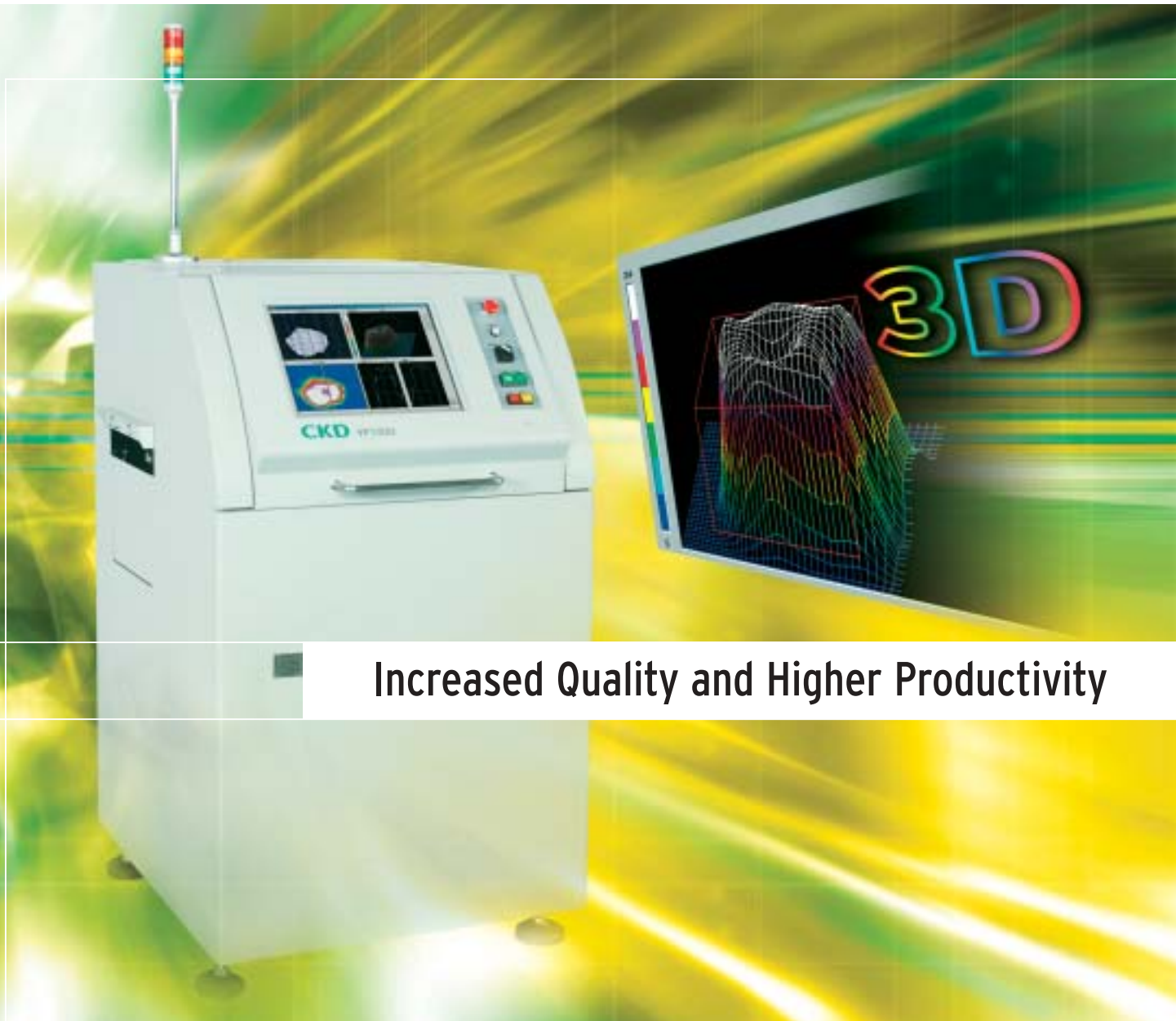


VP Series

Solder Paste Printing Inspection Machine



Increased Quality and Higher Productivity

High Speed 3D Volume Inspection for Solder Paste Enhances Precision

Circuit board suppliers to the surface mount technology (SMT) industry face a rising need to verify accurate solder paste application using 100% printing inspection. The goal is to improve first pass yields at in-circuit test for high density, multi-board panels. Because solder paste deposition remains the key factor affecting quality of finished circuit boards, large volume fabricators want to monitor and control this crucial step to reduce waste and improve throughput.

The high-speed VP Series inline inspection machine utilizes field-proven 3D technology to identify both systematic and random printing errors before boards are loaded. It delivers exceptionally accurate, 100% analysis of paste volume in real time so you can quickly make process corrections, increase production efficiency and reduce waste.

The VP Series seamlessly integrates into the production process with optional loading and unloading conveyors and built-in Ethernet communications that quickly delivers critical process data.

The VP Series enables you to:

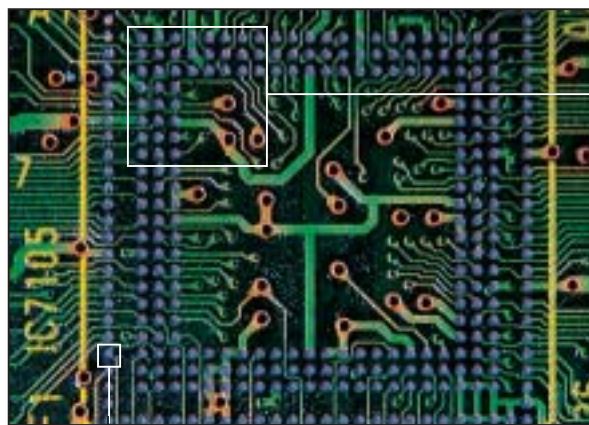
- Collect more precise data through 3D inspection, ensuring process accuracy and higher productivity.
- View inspection results quickly and easily in real-time with on-line or off-line monitoring system.
- Use the process data to optimize print conditions, minimize defects, and accelerate setup changes.
- Utilize a network compatible off-line terminal to analyze data and easily create inspection programs through Gerber data conversion.
- High resolution inspection of 0201 or 12 Mil pitch pad sizes.
- Save data to support reliable tracking of results and process analysis.
- Automatic camera height adjustment to accommodate PCB warpage.

Fast Analysis, Easy-to-Read Display

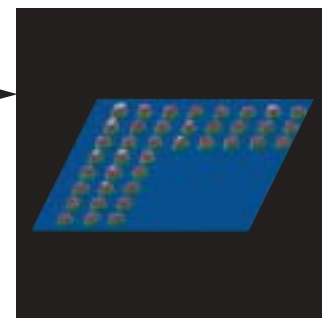
Color phase shift analysis delivers repeatable results faster than laser scanning techniques, streamlining the analysis process and reducing overall production time.

After analysis, solder paste volume is displayed in easy-to-read and understand graphics. Vertical and horizontal cross sectional data displays simplify identification of solder paste faults.

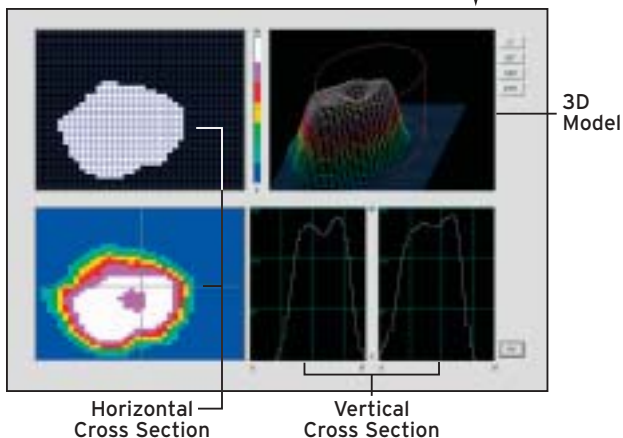
Raw Image



Selectable Area Analysis Image



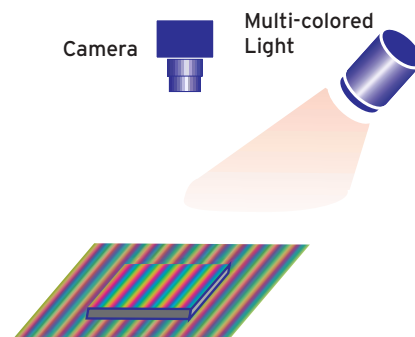
Individual Pad

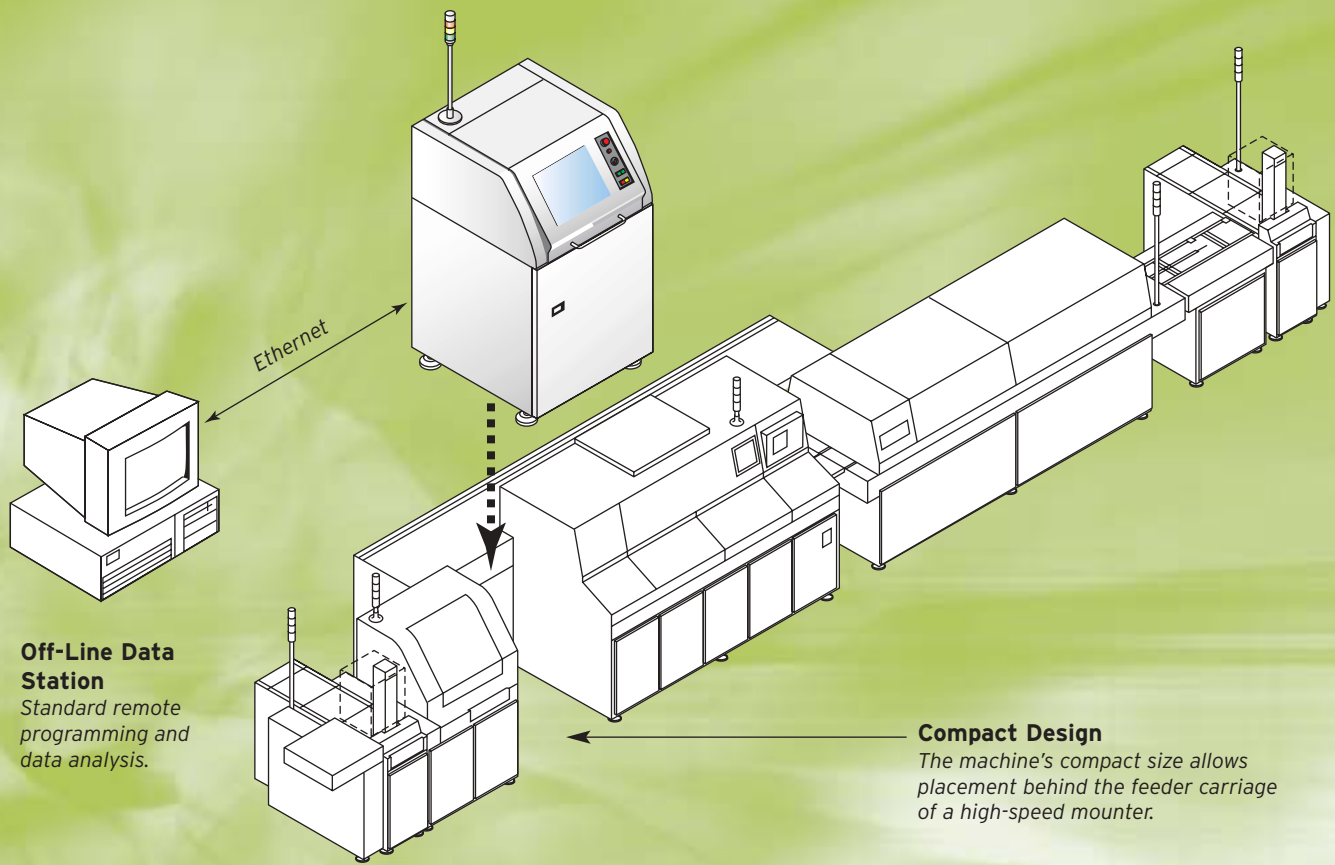


Color Phase Shift, as viewed by the camera, clearly indicates minute changes in surface features



Camera Multi-colored Light



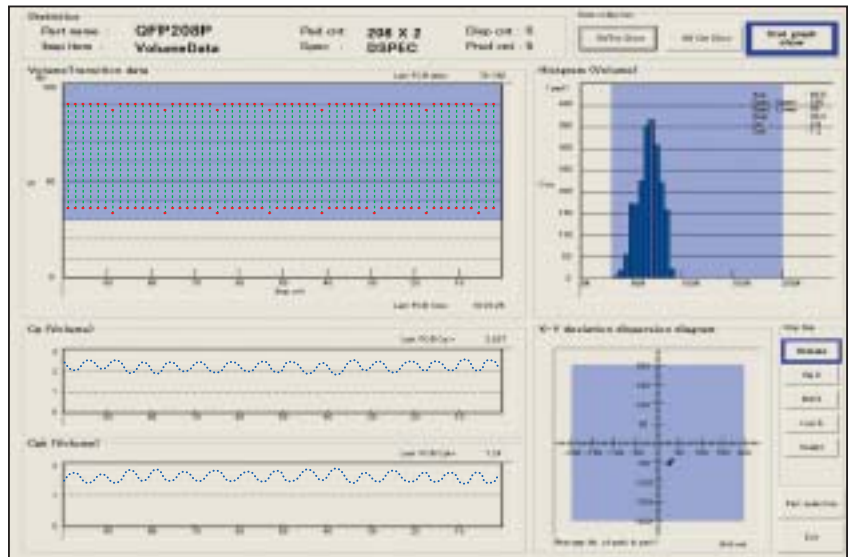


Real-Time Monitoring with Off-Line Data Station

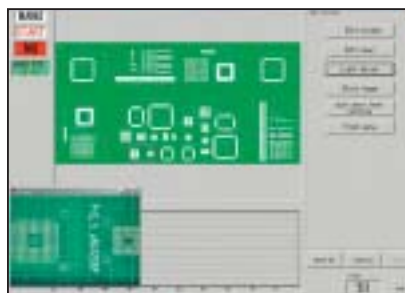
Inspection results can be output to an off-line data station, enabling real-time monitoring of printing conditions. The same workstation can be used for off-line programming by conversion of Gerber data.

Optionally, a multi-station configuration feature enables data output from two or more machines to be controlled in a batch.

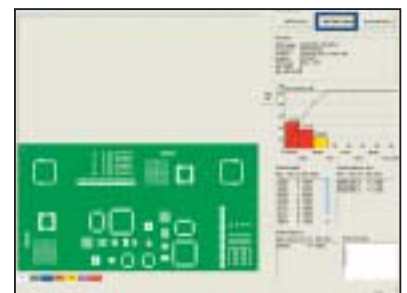
Statistic Processing Function



Fault Location Information Displayed on machine



Fault Location Information Displayed on off-line Data Station



Specifications	VP1000	VP2000
Applicable substrate	Max 330mm x 250mm (12.99 inches x 9.84 inches) Min 50mm x 50mm (1.96 inches x 1.96 inches)	Max 510 mm x 460 mm (20.07 inches x 18.11 inches) Min 50mm x 50 mm (1.96 inches x 1.96 inches)
Inspection capabilities	Printed paste solder volume, excessive deposition, insufficient deposition, smearing, misalignment, height, bridging	
Inspection resolution	HORIZONTAL RESOLUTION - Normal range: 24µm; Fine range: 12µm (Digital switchover of inspection resolution) VERTICAL RESOLUTION - 3µm. Optional High Resolution HORIZONTAL RESOLUTION - Normal range: 16µm; Fine range: 8µm; (Digital switchover of inspection resolution) VERTICAL RESOLUTION - 3µm.	
Inspection view size	30mm x 23mm (1.18 inches x 0.90 inches)	
Inspection speed	Normal mode: 0.45 sec./view Fine mode; 0.8 sec./view	
Substrate flow direction	Right to left or left to right (selected when ordering)	
Conveyor reference side	Front fixed rail or rear fixed rail side of machine (selected when ordering)	
Power consumption	120VAC 50/60Hz	
Electric power	0.5KVA	1.0KVA
Weight	350Kg (771.61 pounds)	580Kg (1,278.68 pounds)

Options:

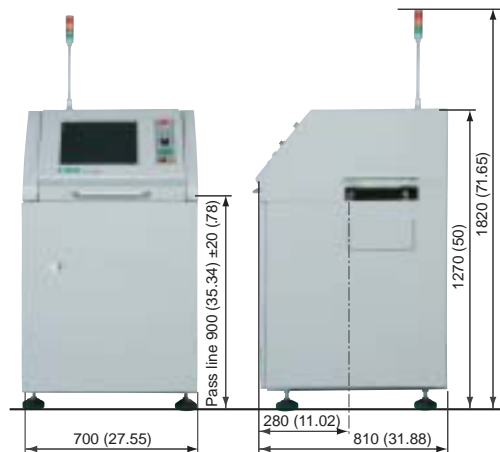
Captive loading conveyor

Captive unloading conveyor

Uninterruptible Power Supply (UPS)

Dimensions: mm (inch)

VP1000



VP2000



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